they retain undivided fingers, such as the embryos have, even exaggerating this feature, in the adult, into an elongated paddle for the anterior limbs. Chelonii constitute, then, the lowest sub-order in the order of Testudinata; and it will presently be seen that its characters are not derived from the form of its representatives. Those who are sufficiently conversant with the subject will be aware that when characters derived from the form have been added to the other characters in order to distinguish the Chelonii, they have answered but indifferently; indeed, the form of Sphargis and that of Chelonia differ much more than that of Emydoidæ compared with Testudinina. The scaly Chelonii, the Chelonioidæ proper, have their shield more or less heart-shaped, and the posterior angle is not prolonged into a projecting point extending far over the tail, as is the case among the naked Chelonii, the Sphargididæ. For this and other reasons which it would be superfluous to mention here, as my object is not now to characterize every group of Testudinata minutely, I hold that Chelonioidæ proper and Sphargididæ, which differ by their form, are two distinct families in the sub-order of Chelonii, and that this sub-order exhibits structural features of inferiority when contrasted with the other Testudinata. Gray and Bell, in their early publications, had, in my opinion, correctly distinguished Sphargidæ and Chelonidæ[1] as families, even though they afterwards gave up that distinction and placed them incorrectly upon one level with Trionyx, Emys, and Testudo. In this respect, Fitzinger presented this matter in a more correct light when, like Oppel, he contrasted the united Chelonii with the other groups of the order; but I believe he was mistaken in urging the reunion of the families of Sphargidæ and Chelonidæ. If the view which I have presented of the case is correct, the marine Turtles would constitute a sub-order, for which a variety of names had been proposed: that of Pterodactyli by Fr. Meyer, that of Thalassites by Duméril and Bibron, that of Oiacopodes by Wagler, that of Eretmochelones by Ritgen, that of Pinnata by Merrem, and that of Chelonii by Oppel, all of which are perfectly synonymous. That of Oppel, which is the oldest, having been proposed in 1811, should have made all the others superfluous, and ought now to be retained. This sub-order includes two families, the Chelonioidæ and the Sphargididæ, as these differ in form. Their characteristics are fully illustrated in the next chapter.

The scarcity of Trionyx in European museums seems to have prevented so accurate a study of that group as of the others. It is, at least, surprising that some of the ablest herpetologists have failed to perceive how greatly they differ from the other fresh-water Turtles. Wagler unhesitatingly unites them with the Emyds, while quite recently Major LeConte has united them with Chelydra.[2] Yet, as

[1] When I quote the systematic names of original writers, I follow their spelling; in other cases, I adopt that which seems to me correct.

[2] LECONTE, (MAJOR,) Catalogue of the North American Testudinata, in Proc. Ac. Nat. Sc., Phila. vii., 1854.